Performance & Evaluation Branch
Operations Division
NWS Office of
Chief Operating Officer
Silver Spring, Maryland

This Issue

Google Analytics in NOAA and the NWS: A Force Multiplier

Noel "Shad" Keene, WFO Medford, OR

Out of 2000 federal government web domains that are being tracked by Google Analytics (GA), two of the top 10 web domains in August 2016 in terms of web traffic were NWS domains. This included the *2nd most-visited web domain in the federal government*, forecast.weather.gov (point-and-click forecasts). These data support the idea that the NWS hosts some of the most widely used web pages in the entire federal government, and it also suggests that given its broad reach, the NWS web presence is a powerful tool in delivering Impact-Based Decision Support Services (IDSS).

In terms of evaluating web-based IDSS, what if we could generate evidence of how and to what extent critical forecasts are reaching both the public and core partners? What if we could help to demonstrate our agency's digital worth during high-impact weather and climate events using existing, passively collected empirical evidence? All of this and more is possible when we implement GA software on all NWS web pages.

The NWS is in its early stages of leveraging GA for improved

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Google Analytics in NOAA and the NWS: A Force Multiplier – Continued from Page 1

service and operations, but we've already learned a lot about the NWS web presence and the volume of partner agency visits to web pages during high-impact weather events. Over 250,000 web page visits from partner agencies in nine northeastern states were recorded in one day ahead of the Northeast Blizzard of 2016. This is nearly 5X the normal amount of winter web traffic to NOAA/NWS web pages.

Next, partner agencies in the Eastern US logged the second-highest web traffic of the year to NOAA/NWS web pages when monitoring Hurricane Joaquin and its potential impacts to the East Coast **(Figure 1)**. The last example is from the Pacific Northwest. Ahead of and during deadly winter storms that resulted in an Oregon State of Emergency, partner agencies visited NOAA/NWS web pages at over twice the normal rate **(Figure 2)**. The data make it very clear that when weather is threatening life and property, partner agencies go to NWS web pages in masse for the latest forecast information ahead of the storm.

GA can also objectively identify what web products partner agencies are using the most. If one knows what web pages core partners routinely make decisions with, one can prioritize web development and execute data- and user-driven product maintenance and improvements. The peak of wildfire season provided an opportunity to objectively test the hypothesis that NWS Western Region (WR) fire weather web pages are essentially a "deep core partner product." GA allows audience segmentation and grouping of similar WR web pages into categories like WFO homepages, observation web pages, marine web pages, and fire weather web pages.

The three pie charts on the next page **(Figure 3)** show the top 3 WR web page groups in terms of partner agency web traffic in August 2016. What this graphic demonstrates is that, although overmatched by WFO homepages and observation web pages in terms of overall web traffic, almost half of the nearly 200,000 fire weather web page visits were from partner agencies, a far greater ratio than any other WR web page group. Integrating GA data like this with other quantitative and

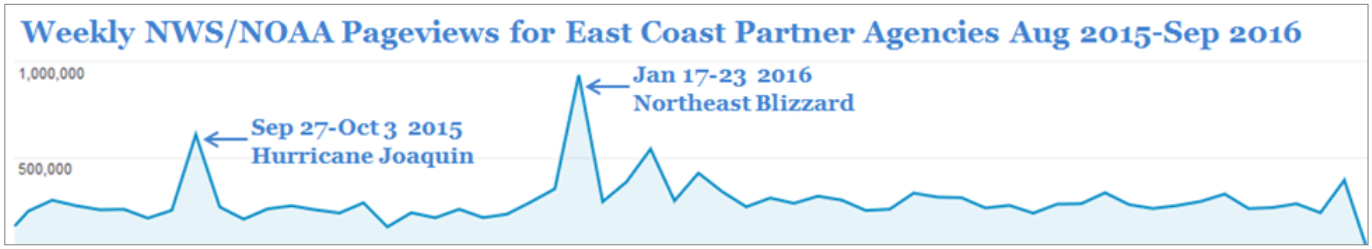

Figure 1. Weekly NWS/NOAA web page visits from partner agencies in the Eastern U.S.

Figure 2. Weekly NWS/N OAA web page visits from partner agencies in the Pacific Northwest.

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Google Analytics in NOAA and the NWS: A Force Multiplier – Continued from Page 2

qualitative data like product-specific surveys would enable improved IDSS to these core partners and would go a step further in adopting a user-oriented action strategy to improve the effectiveness of communication.

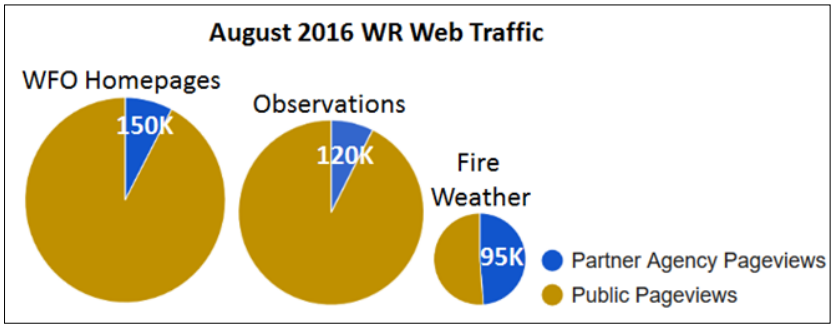

Figure 3. Top 3 WR web page groups in terms of partner agency web traffic in August 2016.

Using web analytics on federal government websites is sponsored by the White House through the Digital Analytics Program (DAP), part of the 2012 Digital Government Strategy's mission to improve the citizen experience by streamlining the collection and analysis of digital analytics data on a federal government-wide scale. GA is a free and powerful tool that can use existing data to generate evidence of our agency's digital worth, improve cost-benefit ratio of web product development, and broaden the reach of IDSS to core partners. To aid in standardized implementation of GA on NOAA and NWS websites, an informative Google Site has been developed, and if you have any questions about using GA on NWS pages, please contact me at noel.keene@noaa.gov.

National Weather Service FY2016 Q3 Customer Satisfaction Survey Update

By Sal Romano, NWS Headquarters

The Performance and Evaluation Branch in the Operations Division of the Office of Chief Operating Officer continues to contract with the Claes Fornell International (CFI) Group to assist in the development and implementation of the NWS customer satisfaction surveys. The CFI Group staff are experts in the science of customer satisfaction and use the American Customer Satisfaction Index (ACSI) methodology. The ACSI was created by CFI Group's founder, Claes Fornell, under the auspices of the University of Michigan. It is the only uniform measure of customer satisfaction of the U.S. economy and is used by more than 200 companies and government agencies.

This article is about the Fiscal Year 2016 third (spring) quarter (Q3 FY2016), continuous, pop-up survey on NWS websites (e.g., weather.gov, forecast.gov, WFOs' web pages) that was "live" from early April 2016 to early July 2016 and the Internet Panel survey that was completed in April 2016. This spring survey provided continuous data collection via the pop-up survey as respondents were exiting the websites, resulting in a total of 6,665 respondents over the 3-month period. In addition, there were 486 respondents to the Internet Panel.

The pop-up survey respondents had an Overall Satisfaction score of 82, as is shown on page 4 **(Figure 1)** from a screen capture of a graphic in the survey results portal. This is the same score as the previous quarter (i.e., the winter quarter). The survey results Web portal is discussed toward the end of this article.

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National Weather Service FY2016 Q3 Customer Satisfaction Survey Update – Continued from Page 3

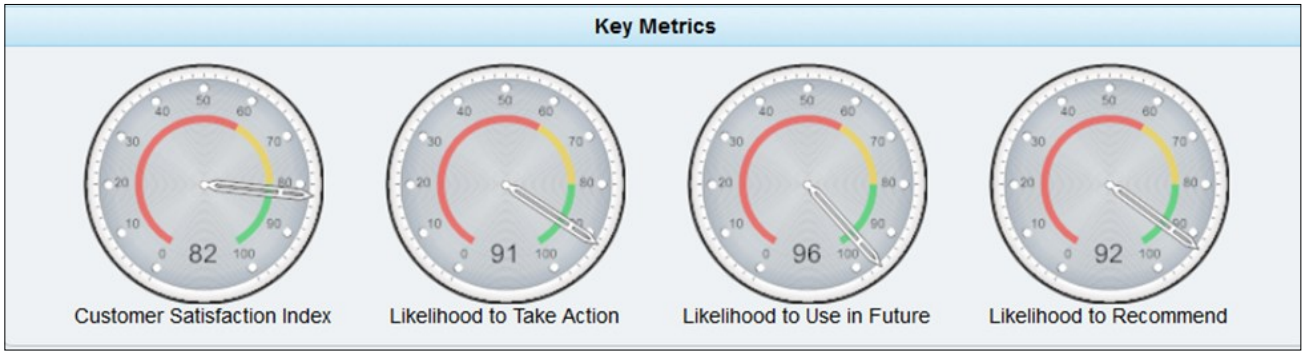

Figure 1. Spring 2016 pop-up survey scores from a screen capture of a graphic in the results portal.

The other three measures shown in the above graphics are scores resulting from these questions:

1. Using a 10-point scale on which 1 means "Not at all Likely" and 10 means "Very Likely," how likely would you be to **take action based on the information you receive from the NWS**?

2. Using a 10-point scale, on which 1 means "Not at all Likely" and 10 means "Very Likely," how likely are you to **use the NWS as a source of weather information in the future?**

3. Using a 10-point scale on which 1 means "Not at all Likely" and 10 means "Very Likely," how likely are you to **recommend the NWS to a colleague or friend**?

The "Take Action" and "Recommend" scores each decreased by one point from the previous quarter while the "Future Use" score did not change.

Each of these quarterly surveys contains approximately 25 questions. The customer and demographics questions make up about 15 questions. In addition, there are about 10 seasonal/topical questions.

These questions are changed from quarter-to-quarter as follow:

- **Spring 2015** (Q3 FY15), winter weather and Weather Ready Nation questions
- **Summer 2015** (Q4 FY15), severe thunderstorms and flash flooding questions
- **Fall 2015** (Q1 FY16), extreme heat-related and weather threats to rangeland fire-related questions
- **Winter** 2016 (Q2 FY16), winter weather and flash flooding questions
- **Spring 2016** (Q3 FY16), severe thunderstorms and tornado questions
- **Summer 2016** (Q4 FY16), this version of the survey went "live" in early July 2016 and contains questions on extreme heat and weather threats to rangeland fires.

In addition to the pop-up surveys, CFI selects a panel of individuals each quarter and compensates them to take a very similar survey on the Internet. These Internet panelists/ respondents more closely represent the demographics of the United States according to the 2010 U.S. Census. The Internet panelists, consisting of 486 respondents, took the spring survey in April 2016, which contained severe thunderstorm and tornado questions. The April 2016 Internet Panel scores are shown on page 5 **(Figure 2)** from a

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National Weather Service FY2016 Q3 Customer Satisfaction Survey Update – Continued from Page 4

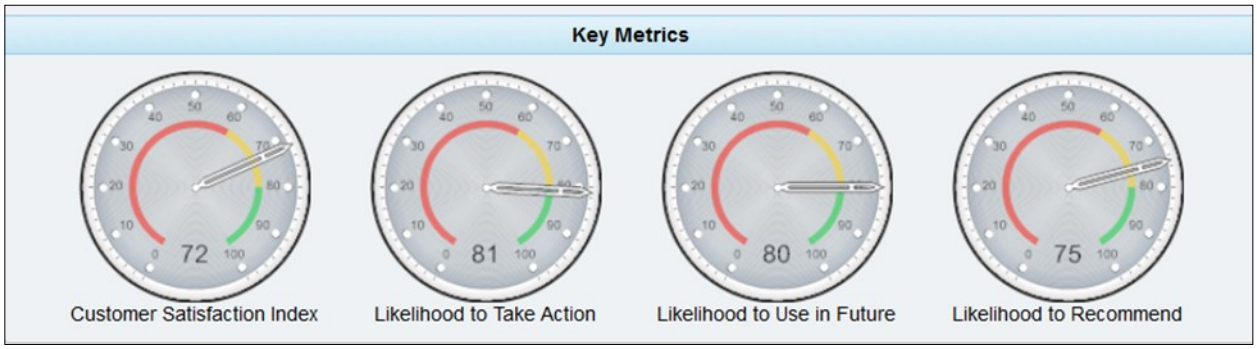

Figure 2. April 2016 Internet Panel scores from a screen capture of a graphic in the survey results Web portal.

screen capture of a graphic in the survey results Web portal. Respondents had an Overall Satisfaction score of 72, which is an increase of one point from the last quarter. This Internet Panel had a Take Action score of 81, Future Use score of 80, and the Recommend score of 75. The Take Action score was the same as last quarter, while the Future Use and Recommend scores increased by one point and two points, respectively, from the previous quarter.

The NWS Pop-Up and Internet Panel survey results are available through a Web portal provided by CFI. You may access the survey results' Web portal at:
https://portal.cfigroup.com/Portal

The generic username and password are:
Username: NWSwm@noaa.gov
Password: NWSportal1

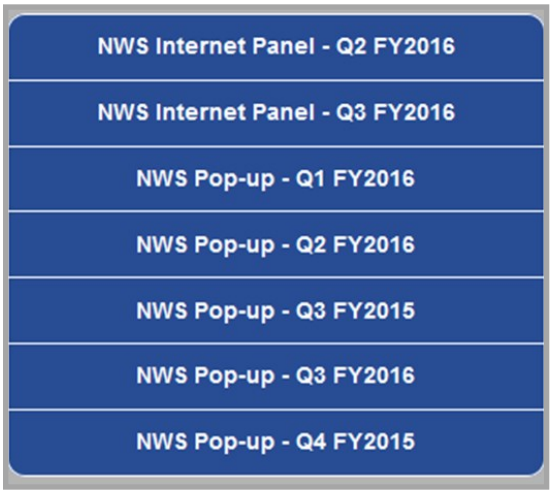

Figure 3. Survey menu selections.

Once you are have gained access to the portal you will see the survey menu selections **(Figure 3)** or in some cases you will need to first go to the upper right side of the screen and click "Exit to Portal List."

If you select any of the "NWS Pop-up" options, for example "NWS Pop-up Q3 FY2016," as shown in **Figure 4** below you can then go to the far left side of the page and click on "Questions." A scroll-down menu will appear containing three WFO options at the bottom: WFO – Group 1, WFO – Group 2, WFO – Group 3. Each of these options contain about 40 WFO identifiers in alphabetical order.

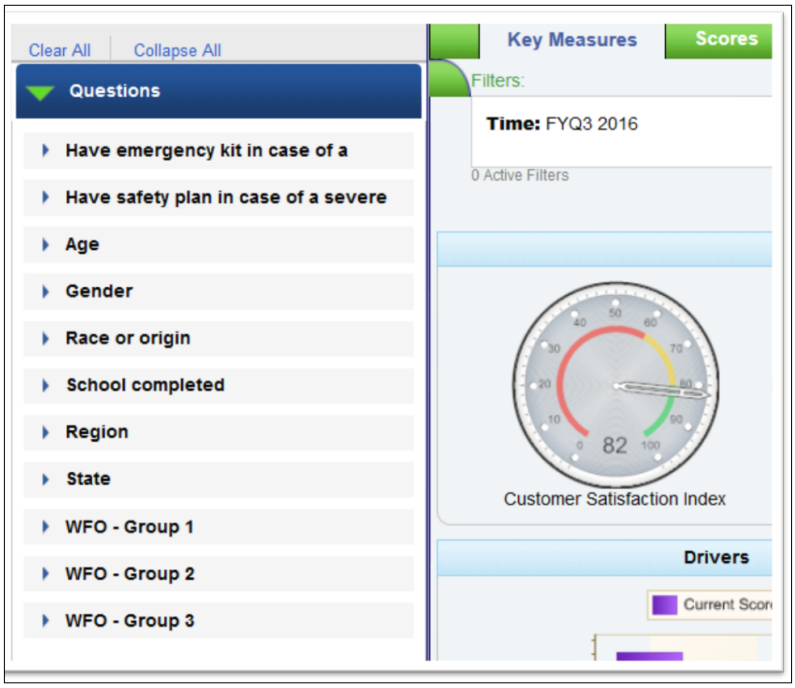

Figure 4. Example of NWS Pop-up Q3 FY 2016 page – Questions and WFO Menu.

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National Weather Service FY2016 Q3 Customer Satisfaction Survey Update – Continued from Page 5

You can obtain the results for one or more particular WFO(s) by selecting the desired identifier(s).

You can obtain all of the respondents' comments for the selected WFOs at the center, top of the page, by clicking the "Comments" selection tab. Once the Comments" selection tab is clicked, a page will be displayed on which in the middle there will be a "Comment Selection" option.

Here are explanations of two of the selection options:

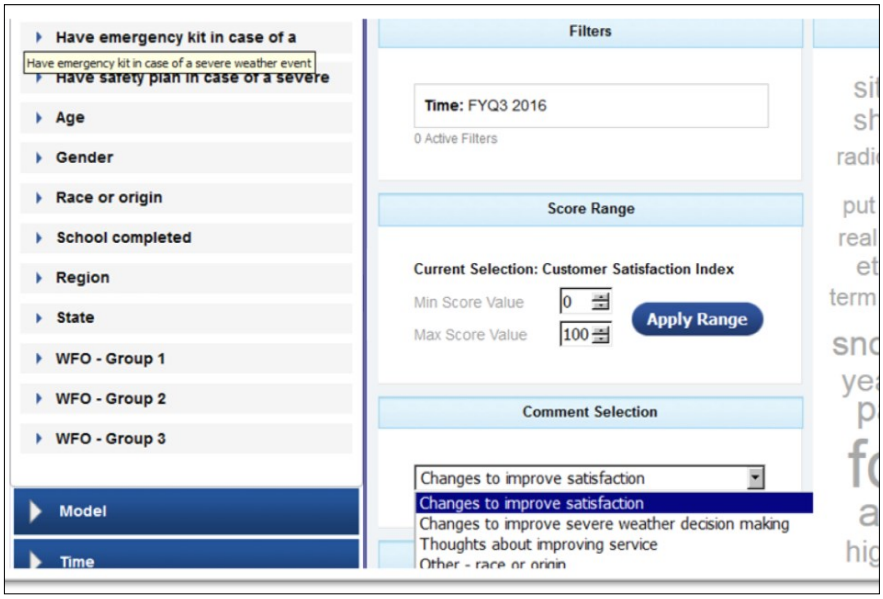

Figure 5. 2016 pop-up survey scores from screen capture of a graphic in the results portal.

First, the "Changes to improve satisfaction" selection **(Figure 5)** is based on the initial question asked of respondents: "First, please consider all of your experiences with the NWS." Using a 10-point scale on which 1 means "Very Dissatisfied" and 10 means "Very Satisfied," how satisfied are you with the NWS?" If the respondent gives a low score (i.e., 6 or lower), then this follow-up question is asked: "Please indicate what the NWS should change to improve your satisfaction."

Second, the "Thoughts about improving service" selection is based on this survey questions: "Please share with us any final thoughts you have about the ways the NWS could improve our services to you." This question is asked of all respondents and not just those who gave a low score.

In regard to the Internet Panel, the results are provided for Q3 FY2016 (April 2016) by clicking on "NWS Internet Panel – Q3 FY 2016" from the main portal menu selection screen.

If you receive our CFI NWS Customer Satisfaction Survey pop-up, please take a few moments to complete the survey.

I'll leave you with a few interesting comments from the Q3 FY2016 survey:

RECOMMENDED IMPROVEMENTS –

"NWS SHOULD BE MADE MORE PUBLIC. MORE AWARENESS IS GOOD!"

"I HOPE TO SEE YOU MORE PROMINENT ON MEDIA DEVICES."

"PLACING MORE ACCURATE, UNDERSTANDABLE AND NOT SO TECHNICAL INFORMATION."

"FIRSTLY, I WANT TO SAY I VISIT *FORECAST.WEATHER.GOV* FIRST THING EVERY MORNING. I WOULD LIKE TO SEE AN ALMANAC-TYPE FEATURE WHICH SHOWS WEATHER IN THE PAST."

"NWS DOES AN EXCELLENT JOB IN MY OPINION AND SAVES A LOT OF LIVES EACH YEAR. MY ADVICE WOULD BE TO KEEP UP THE GOOD WORK!"

"DEFINITION OF TERMS EASILY AVAILABLE; PROVIDE GLOBAL PERSPECTIVE OF WHERE STORM IS COMING FROM; CLARIFICATION OF INFO, EG, WHAT DOES IT MEAN WHEN GIVEN "LESS THAN 1/10 INCH OF RAIN " AND 20% PROBABLY; GENERALLY MAKE IT EASIER TO UNDERSTAND WHAT INFO IS PROVIDED."

"I hope that in my new position at NOAA CIO, I'll be able to find some neat enterprise solutions that make it easier for you to get your job done".

By Brent MacAloney, Performance and Evaluation Branch, NWS Headquarters

Well, here we are…the last entry in my "On the Road Again" article series for the Peak Performance Newsletter. For those of you who do not know or have heard rumblings that I might be moving on to another position, I have accepted a position at NOAA Office of the Chief Information Officer (CIO) as their Enterprise Services Program Manager. I've closed the NWS chapter of my career as of November 2016, after over 17 years of working for the Performance and Evaluation Branch (or Performance Branch or Verification Unit as it used to be called).

I started here back in July of 1999, fresh out of Lyndon State College (VT). Paul Polger (Branch Chief at the time) and Robb Kookaby (Programming Lead at the time) hired me to modernize the Verification webpage and support the StormDat program. We still joke about what possessed them to hire me, as I did an awful job in my interview, but somehow they saw something in me that ended up working out for the last 17 years.

I loved my job right out of the gate. On top of being a lot of fun, I got to support the people at the forecast offices who are on the front lines of saving lives and property. Having a travel budget that supported me visiting all six regional headquarters, each one more than once, as well as visiting over 50 forecast offices was amazing. There was nothing better than putting some faces together with the names of the people that I was supporting. It was the ultimate form of networking and rapport building. Who wouldn't love that type of job?

I have had a few highlights to my career over these years. The first was implementing a web-based StormDat program with programmer Momchil Georgiev. Those of you who have been around long enough will remember just how difficult it was to use and manage the old Corel Paradox based StormDat program. When the new web-based StormDat program, including a mapping feature, was released in 2006, it was a huge step forward in the efficiency of entering events, as well as the accuracy of the reports. The fact that it is still used today with relatively few issues, after 10 years of becoming operational, is a huge testament to Momchil's software development skills.

Another one of the highlights of my time here has to be working with the team that implemented storm-based warnings. Sure there are still some improvements to be made, but the public is so much better off today with knowing the actual threat area than they were 10 years ago. I still am very proud to have been an active part in implementing this warning methodology and technique across the NWS.

Finally, I am very proud of the team that I led in the development of OMB-approved Quick Response Survey questions a few years back. These surveys allow anyone in the NWS to go

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On the Road Again...One Last Time – Continued from Page 7

out after an event to interview the public and find their level of satisfaction with the products and services they received. Although I still feel these surveys are underutilized (mainly due to the lack of an enterprise-wide survey collection software within the NWS), I think they will be a very valuable tool moving forward.

The ability to serve in a leadership role with the three highlights listed above, along with all of the other cool projects I have been able to work on over the years, was made possible by the great bosses that managed and provided guidance to me. Paul Polger, Bill Lerner, Aimee Devaris, and Doug Young all encouraged me to take on tough tasks and do great things for the Branch and the NWS. I had nothing short of their full support in getting things done for the NWS, even if it did not exactly fit into what the Performance and Evaluation Branch should be doing. Having that sort of support from one supervisor, let alone four, was amazing.

Having just turned 40 at the end of August (**Figure 1**), I felt it was time for a new challenge in my life. The career was the obvious place to look for that new challenge, especially since I have been doing the same thing for the better part of two decades. With that said, the decision to leave has been filled with mixed emotions. In one sense, there are a few projects I have been working on that I really would have liked to have seen through to their completion. However, the opportunity to use my problem solving skills to make NOAA a better place to work was too enticing a challenge for me to pass up. I am going into this really hoping that many of the solutions I work on for NOAA CIO will have a direct, positive impact on day to day life in the NWS, as well as the other NOAA line offices.

Figure 1. Brent at his 40th birthday party. Photo by: Manina MacAloney

Looking back, it has been a good ride here with the NWS in their Performance and Evaluation Branch. I think the thing that I am going to miss the most is being able to work with and support the field offices on a daily basis. You all do some awesome, life changing work and it has been a pleasure to work with you and serve you for the last 17 years. I hope that in my new position at NOAA CIO, I'll be able to find some neat enterprise solutions that make it easier for you to get your job done.

Finally, I found it fitting that on the day that I made the decision to leave the NWS for this new chapter in my career, there was an amazingly beautiful sunset (at my home in Elkridge, Maryland **(Figure 2)**. It had to be some sort of sign that I was making the right decision as the sun would soon be setting on my time in the NWS. As most of you are lovers of weather, I hope you enjoy the picture.

Figure 2. Sunset over Elkridge, Md on September 3, 2016. Photo by: Brent MacAloney

Stay well and I hope we all get to catch up again down the road.

Cheers!
-Brent

Did You KNOW ?

By Doug Young, Performance and Evaluation Branch, NWS Headquarters

Did You Know that the Performance and Evaluation Branch is now fully staffed with new contractors?

This is a follow-up article to the "*Did You Know"* submission in the summer edition of Peak Performance. I'd like to introduce you to the two remaining Earth Resources Technology (ERT, Inc.) contractors who began supporting the Performance and Evaluation Branch this summer.

SUJIT PANDEY (SOFTWARE ENGINEER)

Sujit was born and grew up in India and is presently residing in Silver Spring, Maryland. He completed his Masters in Computer Application from Lingaya's Institute of Management Technology, India.

With more than 9 years of experience in software development using various technologies, Sujit has mostly worked in Capability Maturity Model (CMM)-level organizations. CMM is a methodology used to develop and refine an organization's software development process. In the Performance and Evaluation Branch, Sujit is currently modernizing our Performance Management website Account Registration and Permissions Management System. He is focused on meeting our high standards with his newly acquired skills and knowledge—both technical and interpersonal.

In his free time, Sujit likes watching movies and reading books. He also enjoys spending time with his wife cooking (experimenting with new cuisines) and traveling.

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Did You Know? – Continued from Page 9

RAMA ALTHI (SOFTWARE ENGINEER)

Born and raised in India, Rama now lives in Aldi, Virginia. He received his post graduate degree in Computer Science from Andhra University in 1999.

He was previously employed by IBM as a Software Engineer and worked in FDIC for 6 years. He also worked for various agencies in the NY State Government for about 5 years.

While Rama's career started in 1999 as Software Programmer, he moved towards GIS industry. Rama has been working with Microsoft and GIS tools to customize the GIS client-based products. He was one of the first developers in InfoPath with the SharePoint application development team at Microsoft, Inc.

Rama has sound working experience in front end and back end applications and is working toward a redesign of the Performance Management System data importer. Currently, he is in the database design phase of marine data, which will be the base model for other weather, water, and climate data imports. He plans to develop a new universal importer that will solve shortcomings the Branch is experiencing with the current importer.

His Rama has two children—both are soccer players. His hobbies are gardening, watching TV and spending time with family and friends.

Please welcome both Sujit and Rama to the National Weather Service Performance and Evaluation Branch!

Service Assessment Program

By Sal Romano, Performance Branch, NWS Headquarters

One Service Assessment Document Signed While a Another Service Assessment Team Working on First Draft

The Historic Nor'easter of January 2016 Service Assessment was completed and signed in November with a public release date of December 6, 2016. The Hurricane Matthew Service Assessment team was deployed on October 31, 2016 and is working on the first draft of its report.

The Historic Nor'easter of January 2016 Service Assessment

A major winter storm produced 18-36 inches of snow over a wide area of the eastern United snowstorm total snowfall of 29.2 inches. Washington-Dulles International Airport (28.3 inches) and New York Central Park (26.8 inches) recorded their second highest storm total snowfall in recorded history. The storm produced wind gusts exceeding 60 mph at numerous locations along the Atlantic Coast in Massachusetts, New Jersey, Delaware, and Virginia. The peak gust reported was 85 mph in Assateague, Virginia. Major coastal flooding occurred in southern New Jersey and Delaware.

The service assessment document completed final modifications, and was signed by the NWS Director Louis Uccellini November 2016. The public release date for The Historic Nor'easter of January 2016 Service Assessment will be December 6, 2016.

Hurricane Matthew Service Assessment

From Haiti to North Carolina, Hurricane Matthew left a trail of destruction. The hurricane hugged the east coast of Florida, tracking northward, and making landfall in North Carolina. It was strongest for the United States while in the vicinity of Florida; however, its most powerful winds remained just off the coast. Port Canaveral, Florida observed the highest observed gust in the United States of 107 mph. In the southern United States, enormous amounts of rain and the subsequent flooding induced the greatest damage. Savannah, Georgia received 17.49 inches of rain. In eastern North Carolina, from 10-15 inches of rain fell resulting in catastrophic flooding. Storm surge flooded roads, homes, and businesses along the coast. The highest recorded storm surge was 7.8 feet above the ground in Fort Pulaski, Georgia, near Savannah.

The service assessment team was deployed on October 31, 2016 and is working on the first draft of its report. The first draft of its report will include preliminary findings, recommendations, and best practices for review by NWS's Performance and Evaluation Branch.

Performance and Evaluation Branch Points of Contact

Please use the list below as guidance to reach a point of contact who can best respond to your specific request.

Doug Young, Branch Chief (Douglas.young@noaa.gov) 301-427-9312

⇒ Performance and Evaluation Branch General Questions
⇒ Performance Management System (NOAA8203) Support (Primary)
⇒ Performance Management Website (Primary)
⇒ New Verification Initiatives
⇒ Service Assessment Program
⇒ GPRA Measures including Quarterly Program Reviews (Primary)
⇒ Societal Impact Verification (Primary)
⇒ NWS Storm Data Support – guidance; permissions (Secondary)
⇒ Customer Satisfaction Surveys (Secondary)
⇒ Warning Verification (Secondary)
⇒ NOEES Support (Secondary)
⇒ Missing products –restoring missing products into database (Secondary)
⇒ Climate Verification

Chuck Kluepfel (Charles.kluepfel@noaa.gov) 301-427-9304

⇒ Warning Verification – Tornado, Flash Flood, Severe Tstms, Special Marine, outreach and training (Primary)
⇒ Missing products –restoring missing products into database (Primary)
⇒ Marine verification (Winds/Waves)
⇒ NWS Storm Data Support – guidance; permissions (Primary)
⇒ Public verification (Max/Min Temps, PoPs, Sky Cover, Winds)
⇒ Aviation TAF-based Verification (Secondary)
⇒ Performance Management System (NOAA8203) Support (Secondary)
⇒ Fire Weather Verification
⇒ QPF Verification

Sal Romano (Salvatore.Romano@noaa.gov) 301-427-9332

⇒ Customer Satisfaction Surveys (Primary)
⇒ Service Assessment Policy and Team development (Primary)
⇒ Service Assessment Action Tracking
⇒ Quick Response Surveys
⇒ NWS Outreach and Education Event System (NOEES) Support (Primary)
⇒ Societal Impact Verification (Secondary)

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Performance and Evaluation Branch Points of Contact – Continued from Page 12

Beth McNulty (Beth.McNulty@noaa.gov) 301-427-9300

⇒ NWS Forensics (e.g., aircraft accidents)
⇒ NWS Quality Management Services (QMS)
⇒ Aviation TAF-based Verification (Primary)
⇒ Navy TAF and related MOU
⇒ GPRA Measures (Secondary)
⇒ Customer Satisfaction Surveys (Open-ended feedback)
⇒ IMET Tracking software development coordination

Freda Walters (Alfreda.Walters@noaa.gov) 301-427-9296

⇒ Peak Performance Newsletter
⇒ Service Assessments (Request for copies, Action Tracking)
⇒ Purchase Card Requests (COO, AFSO)
⇒ Marine Buoy Station status
⇒ Hazard Statistics

Peak Performance Quote

"Teamwork"

"The strength of the team is each individual member.
The strength of each member is the team."

Phil Jackson
American retired basketball coach and former player

Status of Service Assessment Action Items

Summary

- There are **308** total actions from open events.
- **234** actions are closed.
- **74** actions remain open
- In addition, new actions from the upcoming release of a service assessment, will be assigned.

Recent Service Assessments

1) **Historic Nor'easter of January 2016 Service Assessment:** The Historic Nor'easter of January 2016 Service Assessment document was signed and is scheduled for public release December 2016.

2) **Hurricane Matthew Service Assessment:** The Hurricane Matthew Service Assessment team was deployed on October 31, 2016 and is working on the first draft of its report.

Open Service Assessments

⇒ **South Carolina Historic Flooding of October 2-5, 2015**
Released July 28, 2016
44 Total Actions, 1 Unassigned, 10 (23%) Closed Actions
33 *(77%) Open Actions*

⇒ **Colorado Flooding of September 11-17, 2013**
Released June 24, 2014
26 Total Actions, 21 (81%) Closed Actions
5 (19%) Open Actions

⇒ **May 2013 Oklahoma Tornadoes and Flash Flooding**
Released March 21, 2014
29 Total Actions, 20 (69%) Closed Actions
9 (31%) Open Actions

⇒ **Hurricane and Post-Tropical Cyclone Sandy, October 22 -29, 2012**
Released May 05, 2013
25 Total Actions, 22 (88%) Closed Actions
3 (12%) Open Actions

⇒ **Historic Derecho of June 29, 2012**
Released February 05, 2013
14 Total Actions, 8 (57%) Closed Actions
6 (43%) Open Actions

⇒ **Hurricane Irene in August 2011**
Released October 05, 2012
94 Total Actions, 85 (90%) Closed Actions
9 (10%) Open Actions

⇒ **The Missouri/Souris River Floods of May – August 2011 (Regional Service Assessment)**
Released June 05, 2012
29 Total Actions, 26 (90%) Closed Actions
3 (10%) Open Actions

⇒ **May 22, 2011 Joplin Tornado (Regional Service Assessment)**
Released September 20, 2011
16 Total Actions, 14 (88%) Closed Actions
2 (12%) Open Actions

⇒ **Spring 2011 Mississippi River Floods**
Released April 11, 2012
31 Total Actions, 28 (90%) Closed Actions
3 (10%) Open Actions

Closed Events (all actions completed)

- **Remnants of Tropical Storm Lee and the Susquehanna River Basin Flooding of September 6-10, 2011 (Regional Service Assessment)**
Released July 26, 2012
11 Total Actions - Closed
- **The Historic Tornado Outbreaks of April 2011**
Released December 19, 2011
32 Total Actions - Closed
- **Washington, D.C. High-Impact, Convective Winter Weather Event of January 26, 2011**
Released April 01, 2011
6 Total Actions - Closed
- **Record Floods of Greater Nashville: Including Flooding in Middle Tennessee and Western Kentucky, May 1-4, 2010**
Released January 12, 2011
17 Total Actions - Closed
- **Southeast US Flooding of September 18-23, 2009**
Released May 28, 2010
29 Total Actions - Closed
- **South Pacific Basin Tsunami of September 29-30, 2009**
Released June 04, 2010
131 Total Actions - Closed
- **Mount Redoubt Eruptions of March - April 2009**
Released March 23, 2010
17 Total Actions - Closed
- **Central US Flooding of June 2008**
Released February 03, 2010
34 Total Actions - Closed
- **Mother's Day Weekend Tornadoes of May 10, 2008**
Released November 06, 2009
17 Total Actions - Closed
- **Super Tuesday Tornado Outbreak of February 5-6, 2008**
Released March 02, 2009
17 Total Actions - Closed

Updated November 2016 by Freda Walters

Contributors to this Late Fall 2016 Edition of Peak Performance include . . .

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Please consider contributing to our next issue of Peak Performance Winter 2016-2017

Articles are due Friday, January 6, 2017